Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia - Social and Behavioral Sciences 75 (2013) 308 – 317

Procedia
Social and Behavioral Sciences

2nd International Conference on Leadership, Technology and Innovation Management

The Crucial Need for an Integrated ICT Leadership Approach toward Management with the scope of Improving Profitability into Local non-IT companies

(Case of Macedonia & Albania)

Erjon Curraj[a], Besarta Vladi[b] ,a[1]

[a,b]*European University of Tirana,Tirana, 1023, Albania*

Abstract

Developed countries of Western Europe are already familiar with the major technological boom and especially the period when technological advanced programming and ICT Leaders were in their first steps towards improving the performance of their companies. But we do not have the same overview in developing countries of Western Balkans, such as Albania & Macedonia. The 2012 Report of Global Information Technology shows that the results of NRI[2] indicator which expresses the progress of ICT in different countries of the world have ranked those countries in some positions that are not so preferable compared with a large number of other countries of the world. The aim of this study relates to the identification of any internal organizational factor that causes a lack of technological progress and aims to give some recommendations on how to improve it in the future? A more detailed analysis of CEO-ICT relationships within the company can lead to a better outcomes of NRI indicator in the future and accelerate the progress of ICT in these companies. This relationship in itself is influenced by the leadership style, organizational structure and decision-making style. By comparing the data collected from 40 questionnaires completed by the ICT Leaders in Albania and Macedonia, taking into account the 12 interviews with experts of ICT in these countries, and analyzing statistical results that different national and international institutions has published during 2009-2011, our study highlights an important fact related to the actual relationship between CEO and ICT leaders of 40 companies in Albania and Macedonia. Results indicate that this relationship in the national companies of these two countries is more distant and formal, and actually the importance of ICT department is underestimated.

Keywords: NRI index, Leadership style, ICT, Organizational Structure, Decision Making Styles

1. Introduction

The ICT progress in the second half of the 20th century has made ICT a key element in the success of worldwide business. The attitudes about the role of ICT in the performance of a business are really different and

[1] Tel.: +355 4 24 21 806 Ext.: 134, Fax: +355 4 22 31 668
E-mail address: erjon.curraj@uet.edu.al

[2] *The networked Readiness Index*

doi:10.1016/j.sbspro.2013.04.035

often antagonistic. There are some authors who claim that in fact there is no positive link between ICT development and overall company productivity (Prasad and Harker, 1997). Moreover, according to Weill (1992) companies that has early adopted ICT, have had benefits from it but when it becomes normal for almost all companies, than ICT is neither an element that guarantees the highest productivity, nor giving competitive advantage to those companies in the market. But the key point for ICT to affect positively the performance of the company is to consider it closely related to the innovation. So ICT can be as an incentive and motivation of innovation in these companies. Referring to Nordhaus (2002) concrete results of ICT investment that has increased productivity are found in countries such as Australia, America, and Canada. However, most researchers agree that investment in ICT, directly or indirectly has a positive impact on productivity growth of the company. Anyway, investing into ICT progress needs at the same time investing in additional elements as in human capital and innovation. Also, the impact of ICT in increasing productivity is more apparent to those companies that use an advanced level of ICT (Koellinger 2006).

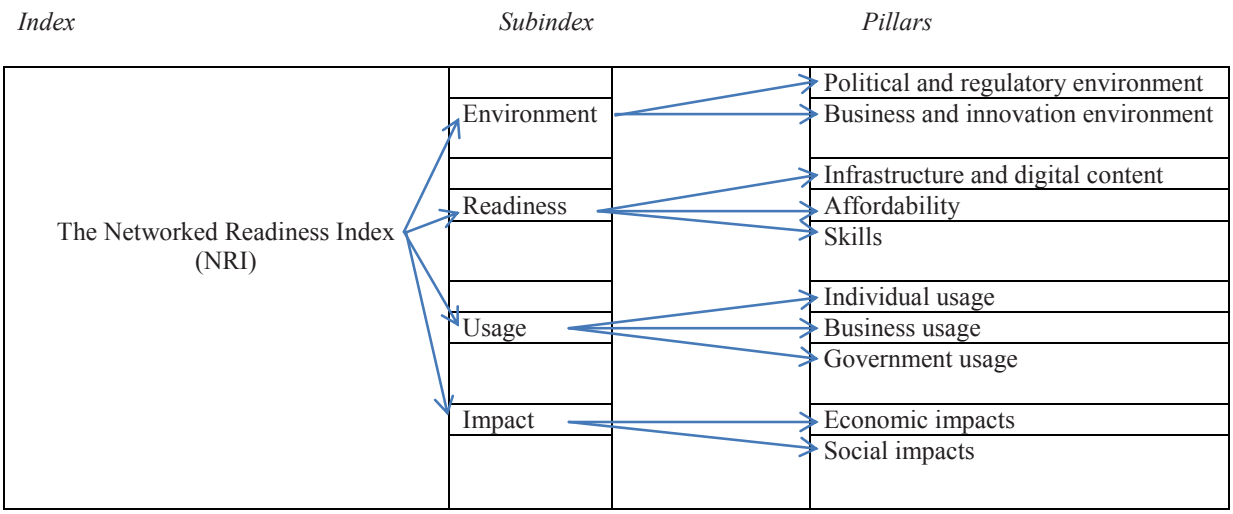
The role of ICT Leaders within the company has always been growing and consolidating, a role which cannot be consolidated without the support of the CEO-s of the respective companies. The CEO-ICT leader relationship is a binomial key to success in business today. The Western Balkan countries such as Albania & Macedonia continue to be considered 'in developing countries', although the transition may not be used without limit to justify their economic, political and social underdevelopment. Western Balkans Regional Strategy for Development and Research of Innovation, created in November 2011 by the European Community, has as its main objective the strengthening of innovative capacity in this part of the Balkans. One out of seven key priorities of this strategy was building up the ICT infrastructure into Balkan companies, focusing on identification of investment in this direction and taking action to create all conditions necessary for the improvement of this infrastructure (Kutlaca, 2010).

In an article of 2005, Kasigwa et al., has analyzed the causes of ICT underdevelopment in developing countries. Their analysis was focused mainly on external macroeconomic factors. In a summary, the results of their research show that some of the factors that contribute to the failure of ICT and ICT projects are "many initiatives are largely ICT supply-driven and fail to specify and address local and cultural impediments and opportunities; they do not take account of the dynamics of the global ICT industry; they are overoptimistic about the productivity improvements that ICTs can bring in traditional industries; and they often overlook the importance of content" (Kasigwa et al., 2005, pp. 80). Solution according to them consists of the following elements: Influencing ICT policy in development context; the necessary for using telecentres; Capacity-building and training; Harmonisation of standards; Repackaging and local content development; Promoting use of traditional and new ICT; Sustainability of ICT projects. (Ibid, pp. 84-86).

There are so many publications on data and statistics about the level of the spread of Information and Communication Technology in different countries of the world but Global Information Technology, based on their methods and indices used for measuring the degree of spread and especially the impact that ICT has in different places of the world, somehow guarantees complete data in this regard. In the 2012 Report, Global Information Technology has introduced the evolution of 'Networked Readiness Index (NRI)' in 142 states of the world, among which the Western Balkan countries. The NRI is composed of a mixture of quantitative data collected by international organizations—such as International Telecommunication Union (ITU), the United Nations, and the World Bank— and survey data from the Executive Opinion Survey. The index was originally created to measure access that different countries of the world have had to the ICT, until 2010. But since this year the goal of NRI index is not to measure the access, but measuring the impact that ICT has on the socio-economic aspects in different countries of the world. This change relates to the fact that measuring the impact of ICT in economic and social development is a necessity for all companies and states. For this reason the goal of NRI index is to explain how ICT transforms the economy and society in different countries of the world. NRI index constituent elements, classified as 4 basic NRI's sub-indices, in a summary are: Environment sub index, Readiness sub index, Usage sub

index and Impact Sub index. Each of these consists of several main pillars, which are known as 10 basic pillars of NRI index, as are shown in the figure below. Final result of the NRI for each state is a simple average of four sub-indexes that comprise it, and on the other hand, every sub-index is a simple average of its constituent columns.

Table 1. The Networked Readiness Index. Source: Dutta et al. (2012), The Networked Readiness Index 2012: Benchmarking ICT Progress and Impacts for the next decade, The Global Information Technology Report, pp. 5.



Based on the results of this general index NRI, the ten most successful countries concerns not only access, but rather the impact that ICT has had in terms of their economic and social impact are Sweden (5.94 points), Singapore (5.86 points), Finland, Denmark, Switzerland, Netherlands, Norway, USA, Canada and UK. In this report, the results of this index rank Macedonia into the 66/142 position (3.91 points) and Albania into the 68/142 position (3.89 points), only two locations below the Macedonia. In this report, there is no evidence for the Republic of Kosovo. Meanwhile, sorted by sub-indices and respective columns, about the first subindex, Environment sub-index's pillars, three leading countries seem to be Singapore, Finland and Sweden. Macedonia ranked 60/142 while Albania instead of 82/142. According to Readiness Sub index and Pillars, three leading countries are Iceland, Finland and Sweden. Albania ranks instead of 65/142 and Macedonia instead of 78/142. Sweden, Korea and Denmark lead in Usage sub index results and Pillars. Macedonia is in place of 61/142 and Albania instead of 62. In terms of recent sub index and its pillars, Impact sub index, the countries with the highest scores are Singapore, Sweden and Taiwan. The results of this sub index put Macedonia in the 71st position and Albania in the 72nd. (Dutta et al., 2012).

Since this study will focus only on two Western Balkan countries (this is due to the similarity that these two countries show in the NRI index results), it is important to reflect in detail the results of this report (by 10 pillars of NRI) for each of them. As about Macedonia, its strongest point is the Individual usage pillar (position instead of 46) whiles its weakest point is the business usage pillar (by positioning it in place 113). On the other hand, Albania does not affect the positive or negative extremes. It has as its strongest points the Skills pillar, ranking it in 56th place and its weakest points is the Political and Regulatory Environment pillar, ranking it in the 89th place in the world.

Table 2. Source: Dutta et al. (2012) "The Networked Readiness Index 2012: Benchmarking ICT Progress and Impacts for the next decade" The Global Information Technology Report, pp.13-16

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	
	Political and regulatory environment	Business and innovation environment	Infrastructure and digital content	Affordability	Skills	Individual usage	Business usage	Government usage	Economic impacts	Social impacts	RANK
Macedonia	83	47	59	96	68	**46**	**113**	63	87	56	
Albania	**89**	78	75	57	**56**	59	74	64	75	69	

From the above table, the constant part of our analysis will remain only the seventh pillar, Business Usage, which relates directly to the internal environment of each company included in the study. As we can understand from the table, Business Usage Pillar turns out to be one of the most problematic pillars for both countries of this study. This pillar implies the use of the Internet by business, as well as local companies, their efforts to integrate ICT within the company, technology-savvy, ability to create a favorable environment for innovation and productivity and to generate profit. So this pillar gauges firm's capacity to absorb technology, capacity for innovation and technological innovation. The priority of this study is to identify alternatives that lead to improvement of the seventh pillar of NRI index, Business Usage. As it is going to be elaborated in the following, based on data collected through questionnaires and interviews, one of the main reasons for this poor performance in this pillar can be linked with the CEO-ICT relationship within a particular organization. On the other hand, this relationship in itself is influenced by the leadership style, decision-making style and the organizational structure. All these factor affecting ICT- CEO Relationship in short and long terms. As strong and collaborative relationships between these two parties, the greater the chances of having ICT progress and improvement of NRI index results in the future for these two countries.

2. Literature Review and Hypotheses

In a study done by Youssef et al (2003) in 2500 Catalan firms in order to understand the factors affecting the adoption and use of ICT, have started their thesis by making the assumption that at least theoretically, variables that can affect this area are: a) size of firm (connectivity and scale economies), b) the absorptive capacity (workers qualifications, research and development, cooperation), c) the organization, d) the competition, e) the location (pp.2-4). Two basic assumptions of their research were: First: "Size, firm's productivity, workers skills and training, new organizational practices, innovations willingness and corporations skills to innovate are the main variables explaining the probability of ICT adoption by firms." The second hypothesis was: ""Size, economic sector, labor productivity, networking organizational structure, managers skills, workers profile, and innovative capabilities based on ICT uses are the main variables on the explaining of a firm's probability of depth of digital adoption" (Ibid. pp. 5). They have calculated their results by using two econometric models, an ordered probity econometric model and a general model.

Meanwhile, in contrast to their study, the basis of analysis of this paper will be several other internal organizational factors that leading to the ICT underdevelopment, such as leadership style (and when we talk about leadership in this case we consider only the CEO of any company), organizational structure and style of decision making within the company, for example the decision about the strategy for the division of budget and funding to various departments within a particular company. All these elements, directly or indirectly impact on the improvement of the NRI index pillars that are based on the internal environment of the company. Close and cooperative CEO- ICT relations, not in terms of personalized relations but in terms of professional coordination and interaction between them, would lead to improved results of some of the pillars of NRI index, and therefore also in an overall positive result of this index in itself.

2.1 Main Concepts

There are so many researchers such as Kurt (1939), McGregor (1960), Blake and Mouton (1964), Adair (1973), Stogdill (1974), Tannenbaun and Schmid (1958), Bass (1990), Katzenbach and Smith (1994), Belbin (1993), Covey (1992), Bass and Avolio (1994), Ogbonna and Harris (2000), Zhu et al. (2005) that have studied the ***leadership*** theories within a particular company or organization. However, three dominant types of leadership defined by Lewin (1948) are: autocratic leader, participant leader (democratic) and the deleguesose laissez-faire leader (Ferguson et al., 2006, pp. 43). Basic characteristics of an autocratic leader are: clear expectations, clear and solid separation between leader and subordinates, little or no information and data from others, tends dictatorial approaches. On the other hand, the key features of a democratic leader are: being cooperative, prioritize to group work and decentralization of group decision making. Finally, delegating leadership characteristics are: provides minimum guidelines, waives decision making, delegating responsibility to others.

The leadership type of the company is directly linked to success or failure of the pillars of NRI index. An authoritarian leader who creates a significant distance from his subordinates' claim that he/she knows everything, do not allows breathing space to ICT development and innovation. Meanwhile, a democratic leader and delegator will contribute positively towards the ICT development as he/she will delegate enough responsibility and powers to the leader of ICT, who needs a certain level of delegation, in order not to become an enforcer mechanic and executor of others decisions. So in order for ICT and ICT leader to develop in a progressive manner, the company has no more need for a 'Leadership' but it needs what Olsen (2006) calls 'leadingship'. After his concept of leadingship is "The ship for persons who want to lead themselves together with others in the sense of making individual decisions and contribute to common decisions" (pp. 4). In other words, leadingship is "The self-determination for the individual to make personal decisions within his or her own area of responsibility and the concurrent access to participation in common decisions" (pp. 6). Such a perspective on management of the companies would help the actual and future managers to advance towards ICT. The main advantages of leadingship, compared with Leadership are: individual responsibilities for each person within the company and not only for the top manager, so it is Leading of the process and not of persons. Also, the role of leadingship is performing and not monitoring within the company, developing competences for all staff and not only for the top manager or some few people who may be in superior positions. All members of the company must feel as a leader in their own position in the company. In this sense, such a conception of the organization direction would lead to ICT development.

On the other hand, the organizational structure is another element that affects the progress of ICT. For typologies and the impact of organizational structure have written different authors such as Duncan (1979), Nadler and Tushman (1988), Ostroff (1999) etc. Despite that forms of organizational structures are different, the two standard models remain hierarchical organizational structure (vertical) and flat (horizontal) (Olsen 2006). A more detailed classification can be: functional structure, structer based on product, geographic and matrix structure. If we make a comparison between a matrix structure and a linear structure, ICT progress certainly will come to the aid of a decentralized matrix structure because after such a structure ensures integration of departments, combines functional departments and business units, through planning and negotiation with functional departments, aimed at achievement of specific goals related to product design or territory, increased integration and exchange of knowledge, provides the basis for making good decisions, better respond to environmental changes, inspires a willingness to good acceptance and implementation of decisions etc. (Ostroff and Smith 1992).

Decision-making Style is also a conditional element of CEO- ICT leader relationship. According to Gibson et al (1994) two main categories of decisions include: programmed decisions and unprogrammed decisions. While Dearlove (1998) asserts that decisions may be strategic or operational. Rowe and Bouldgarides (1992) on the other hand mention three types of decisions: routine, creative and negotiated. Anyway, in order to reveal the role that ICT Leaders has into the decision-making process of the company, the classification that Robbins (1998) has made to the kind of decision making will explain clearly the situation. According to him, the company may encounter five types of Decision Making: Autocratic (AI), Autocratic II (AII), Consultative I (CI), Consultative II (CII), and Group II (GII). In order that the style of decision-making to affect positively the ICT growth and ICT manager's role in the company and to improve NRI indicator pillars, then the most appropriate style of decision making would be CII (You share the problem with your subordinates as a group, collectively obtaining their ideas and suggestions then you make the decision that may or may not reflect your subordinates' influence) or GII (You share the problem with your subordinates as a group. Your goal is to help the group concur on a decision. Your ideas are not given greater

weight than those of others). The other categories of decision-making style would make ICT Leadership and ICT roles still remain secondary to the company.

A crucial decision for the company would be for example the way the budget is divided, and especially the part of the budget that goes in the function of IT&ICT department. There are various forms of budgeting such as: open-end Budgeting, Budgeting fixed-ceiling, Priority listings (Miller et al, 2001). Based on the fact that ICT operates through projects and this department does not do routine work which can be foreseen and calculated so solid, then if the budget is fixed-ceiling type budgeting, this will prevent its development. Although IT and ICT department can be considered a high cost in the short term, but in long term the investment made into them is totally justified.

2.2. Development of Hypotheses

Despite the fact that different scholars share different opinions on the impact that ICT has on company performance, this study takes for granted the idea that the progress of ICT means a progress of the company itself and its performance. Authors like Barua (1995) argue that ICT has a very positive role in company performance. But on the other hand, Holland (1997) asserts that the effect of ICT on company performance is negative. Strassmann spoke to the concept of 'productivity paradox': "productivity (and competitive advantage) does not depend on the amount of ICT investments but is strictly related to the ICT strategic management" (Tagliavini et al, pp. 2), a concept which somehow clarifies the idea that when ICT impacts positively on the company's performance. However, considering the true assertion that ICT development positively affects company performance, the main hypotheses posed in this paper is that:

Hypothesis: ICT development is directly or indirectly related to the mutual CEO - ICT leader relationship within the company.

The closer and reciprocal relationship that will exist between them, the greater possibilities will be for them and for the company to have benefits in the future. Meanwhile, improvement of the relationship in itself is under the three direct internal organizational elements, which constitute the sub-hypothesis of this paper:

Sub-Hypothesis: CEO – ICT leader relationship depend on leadership style, decision-making style and organizational structure within the company.

3. Methodology

3.1. Research goal

The main purpose of this paper is to identify the reason why ICT and NRI indicator that measures its progress, are not in a satisfactory levels in the Albania & Macedonia. The goal we are aiming is to improve these indicators in the near future. Albania & Macedonia are still considered developing countries, to progress towards Information and Communication Technology is a necessity for their transition from being a 'developing country' in 'developed countries'.

3.2. Sample and data collection

The results of this paper are based on data collected from questionnaires with 17 questions that are complemented by ICT Managers in 40 different companies in Macedonia and Albania. Meanwhile, those ICT managers should fulfill two conditions: First, they should be employees of local companies and not part of any international company. Secondly, we were considering only medium to large non-IT companies. The total number of questioners fulfilled is 20 in Albania and 20 in Macedonia which number corresponds to 4% of total potential target group based on numbers we got from commercial trade affair. The companies where the questioners where emitted where chosen randomly. As we did analyze the answers we came up with several hypotheses that we wanted to be sure about it. Another proves of concept method to ensure our results was interviewing our self 4 of the ICT leaders out of 20 with semi-structured questions. The selection of them was made based on level of expertise and experience.

3.3. Analyses and results (Analysis of survey results)

The study that Youssef et al (2003) conducted in 2500 Catalana's companies, he used two econometric models for data processing and data presentation: an ordered probit econometric model and a general model, which could have been used in this study if we had any tendency to present an econometric model. Factorial analysis would be another possibility to interpret the data. However, since this study in its first step aims to ascertain the existence or non-existence of the problem preset, then a simple interpretation of statistical data, sharing and comparing them based on the two countries we studied, may be necessary and sufficient.

Most of the ICT managers who have completed the questionnaire where from service companies (87% of respondents in Macedonia and 79% of respondents in Albania). Rests of the respondents were mainly from different factories, distribution companies, etc. Most of them (58.3% to 52% in Macedonia and Albania) are working for more than 3 years in the respective companies; this factor ensures us that they are confident enough to talk about the system and the operations inside their company.

Results of the question 'What is the position of CEO against you?' and 'Are you part of important decision-making within the company where you work?' are very similar between the two countries. As is shown from the diagram in the case of Macedonia, 57% of respondents stated that CEO is passive against their opinion but insists more, he can be convinced to invest in ICT. In the case of Albania, this figure is higher, 66% of total respondents. Such a result automatically can be interpreted as an underestimation of the role of ICT by the CEO-s on different companies. However, from interviews conducted, emerges an interesting element which almost unanimously is accepted by all respondents. In a large number of cases, there isn't simply the underestimation of CEO towards IT but also the lack of confidetation of IT leader itself toward CEO. Often they do not take the initiative to present their ideas to executives of the company because they take for grant that they will not be taken into consideration. All we know is that should happen all the opposite. Whether or not shall be taken into account their ideas, they should do their utmost to introduce new ideas and to convince CEO's of the respective companies that those ideas should not remain merely on paper.

In the support of the above argument we have the results of the question 'Are you part of important decision-making within the company where you work?'. With more than 30% of respondents answering this question by selecting option 'never' which imply a serious problem for companies of the respondents in question. The rest (53% to 47% in Macedonia and Albania) have answered the same questions with the option 'Sometimes' and less than 20% in both states have chosen the option 'often' or 'always' (see Fig 1). This situation, as we will treat the following unquestionably is associated with a variety of factors such as organizational culture and decision making, leadership style, organizational structure etc. For example, a structure more rigid and hierarchical certainly will not be included in decision-making representative of other departments; such structure directly inhibits the development of ICT and innovation in these companies.

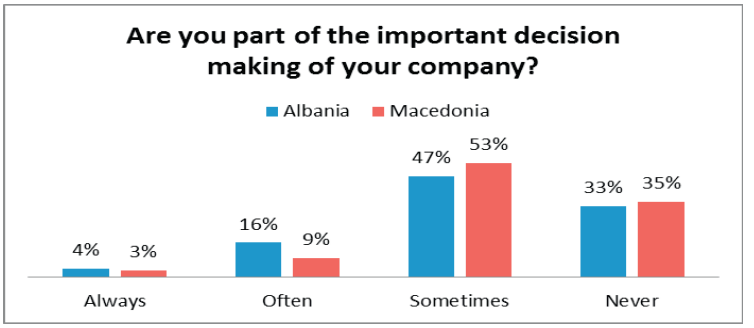


Fig. 1. ICT participation into the decision-making process

The answers of question 'What do you think about your department?', about 80% of respondents in Macedonia, and about 87% of respondents in Albania appreciate the department of ICT as the most important departments (see Fig 2/b) while on the other hand, the question 'What is the CEO opinion about ICT department?' results are extremely different. About 41.7% of respondents in Macedonia, and about 54% of Albanian respondents think that their CEO appreciate ICT department however other departments are more important. With less than 4% of respondents in both countries believe that the respective CEOs consider the ICT department as the most important departments the company (see Fig 2/b). Again, the perception of them may be bias, which restores once the analysis

to the initial point of responsibility for underdevelopment ICT is not only CEO but also ICT Leaders themselves with their prejudices and hesitations.

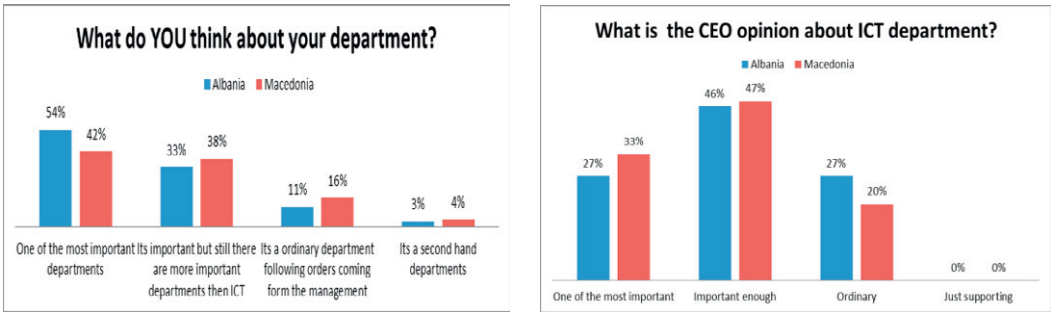


Fig. 2. (a) ICT leader's opinion about ICT department; (b) Opinion of CEO about ICT deaprtment

Regarding the organizational structure, the question "Based on the Organization chart of your Company, where do you normally report?" In 97% of cases resulting structure to be hierarchical and hierarchical structure in this 53.8% of cases in Macedonia and 63% of cases in Albania claim that the structure is hierarchical and do reporting to CEO. While 33% of cases in Macedonia and 37% in Albania claim that the structure is hierarchical and reporting to the CEO not only done but to all managers as CEO, Finance Manager, marketing manager (see Fig 3). One such structure, at about 90% the case is considered as an impediment to ICT development by the experts interviewed but also by the respondents. Again, such an outcome is unsatisfactory and even constitutes an obstacle for development of ICT and innovation in companies of countries in the study.

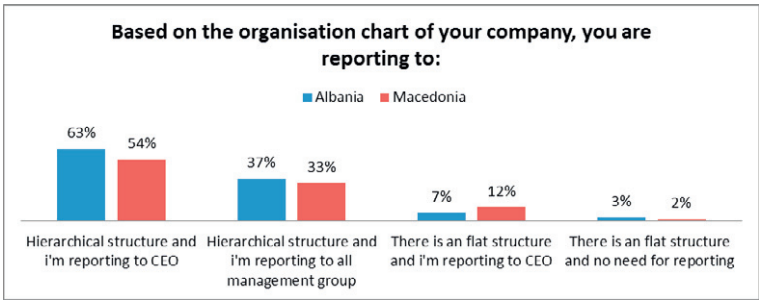


Fig. 3. ICT reporting process in company

Another important question relates to the style of decision 'How is the Decision Making Style in Your Company?' In Macedonia, 53% of respondents stated that decision making is bureaucratic and that they are almost always the same people who make suggestions and take decisions. The same thought had even 58% of respondents in Albania, about the same question. With less than 25% of respondents said that decision is open, the discussion is free and inclusive (see Fig 4/a). Such a result makes us understand that indeed the current situation in companies in the study is problematic for the development of ICT. Their exclusion from decision-making process leads to the underdevelopment in the future, considering ICT department as a bunch of engineers that doesn't need any but just operating as IT supporters.

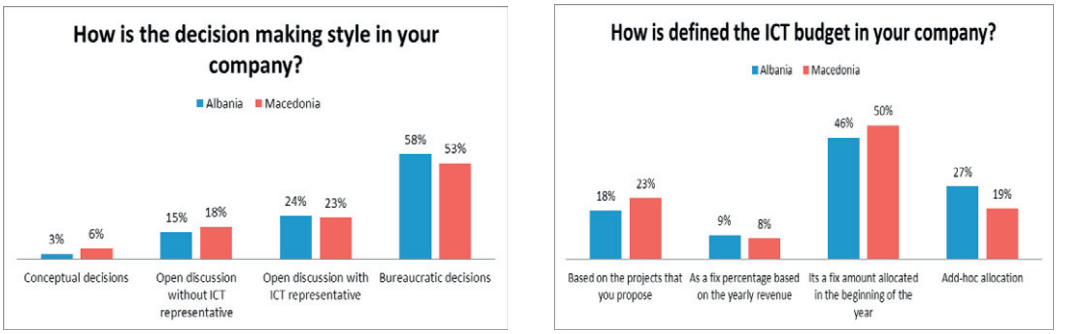


Fig. 4. (a) Decision-making style; (b) ICT budget strategy

A specific question is made regarding the decision of the budget distributed among different departments, given the particular focus of that part of the budget that goes for the ICT department (see Fig 4/b). As is shown from the diagram, the budget is determined at the beginning of the year and an opportunity to revise the budget in favor of ideas that may come from the IT department is considered minimal. In order for ICT to progress through innovative ideas and projects it needs to have a more comprehensive budget allocation. At the bottom line ICT cannot make progress with a limited budget or predetermined from non ICT specialist. It must generate ideas and then to be supported financially because only in this way could be developed.

4. Conclusion

Era of globalization without technological modernization, ICT and innovation would not have the progress that has currently. However, this progress differs in different countries of the world. Such a lack of balance in the development of ICT is expressed in the 2012 report of the Global information Technology. Albania and Macedonia are not classified in good position in this report, classification based on the results of the NRI index. The causes of such an underdevelopment may be different but this study aims to throw light on the internal organizational factors. The aim of this study is not to give formula to solid universal character, but to focus on two concrete realities, the case of Albania and Macedonia, and to tackle underdevelopment from the viewpoint of internal factors of organizational environment.

The main hypothesis of this paper is the underdevelopment of the ICT related to the relationship CEO-ICT Leader, his relation is conditioned from three key elements: leadership style, organizational structure and style of decision making. The results collected through interviews and questionnaires distributed to managers of ICT in 40 national companies in Macedonia and Albania show that the role of ICT in these companies are still not sufficiently considered. First, ICT departments still remain secondary in the majority of the companies included in the study. A good part of them consider ICT department as facilitator and that the company has many other departments that are most important. Secondly, the style of leadership turns out to be not very democratic and delegating such a style it really can be an obstacle for the development of ICT. Also, rigid and hierarchical structure is an impediment to ICT in itself because such a structure is conditioning the style of decision making, delegation of powers and responsibilities, risk-taking and motivation to generate new ideas in business.

Summarizing, the results of the two countries in the study are more or less similar. The Macedonia case turns out to be a little more progressive in some elements such as for example in making ICT leaders part of the decision making or in support them financially more than in the case of Albania. However, the majority of cases and to the elements included in the study show us that the results are almost identical. Recommendation that can be done in both countries is that shouldn't be enough to financially invest in new technologies but also to create conditions in the internal organizational environment for ICT development. A flexible organizational structure and linear style of democratic leadership style and a more comprehensive and consultative decision making would make the ICT progress and results of NRI index in the future to improve significantly.

References

Ambrus et al. (2009), Group versus individual decision-making: Is there a shift?, Harvard University, pp. 1-37.
Anthony et al. (2006), Organizational Culture and climate, University of Tennessee, pp. 1-17.
Barua et al. (1995), Information technology and business value: an analytic and empirical investigation, Information Systems Research , 6 (1), pp.3-23.
Beckmann, M dhe Armbruster, K. (2010), Business environment, managerial strategies, and the allocation of decision-making authorities in Swiss Firms, Center of Business and Economics (WWZ), University of Basel, pp. 1-33.
Bolden et al. (2003), A review of leadership theory and competency frameworks, Centre of leadership Studies, University of Exeter, UK, pp. 1-44.
Dearlov, D. (1998), Key management decisions: tools and techniques of the executive decision-maker, Pitman publishing, London.
Dutta et al. (2012), The Networked Readiness Index 2012: Benchmarking ICT Progress and Impacts for the next decade, The Global Information Technology Report, pp. 1-441.
Farrington, J. (2011), Getting inside the decision making process, pp. 1-15.
Ferguson et al. (2006), From Leadership to Parenthood: The Applicability of Leadership Styles to Parenting Styles, Group Dynamics: theory, research and practices, 10 (1), pp. 43-56.
Gibson, I. and Donnelly, J. (1994), Organizations, Burr Ridge.
Hilaire, F. (2008), Leadership Theories: Toward a Relational Model, University Laval, pp. 3-56.
Holland, C. and Lockett, G. (1997), Mixed Mode Network Structures: The Strategic Use of Electronic Communication by Organizations, Organization Science 8 (5), September, pp. 475-488.
Kesigwa et al. (2005), The Role of ICTs and their Sustainability in Developing Countries, pp. 78-88.
Koellinger, P. (2006), Impact of ICT on corporate performance, productivity and employment dynamics, European Commision, Enterprise & Industry Directorate General, pp. 1-33.
Kutlaca, D. (2010), Western Balkans Regional Strategy on Research and Development for Innovation, Mihajlo Pupin Institute, Serbia, pp. 1-17.
Nordhaus, W.D. (2002), Productivity growth and the new economy, Brookings Papers on Economic Activity, pp. 211-244.
Olsen, R. (2006), A change from leadership (vertical power structure) to leadingship (horizontal power structure) at work, pp. 1-33.
Ostroff, F. and Smith, D. (1992), The horizontal Structure, The McKinsey Quarterly Journal.
Prasad, B. and Harker, P.T. (1997), Examining the contribution of information technology toward productivity and profitability in U.S. retail banking, Wharton School Working Paper 97-07, University of Pennsylvania, Philadelphia.
Robbins, P. (1998), Organizational behavior, Eight Edition, New Jersey, Prentice Hall.
Rowe, J.A. and Boulgarides, D.J. (1992), Managerial Decision making: A guide to successful business decision making, New York, Macmillan, pp. 1- 16.
Tagliavini et al. (2001), Empirically testing the impact of ICT on business performance within SMEs, Università Cattaneo, Italy, pp. 1-18.
Weill, P. (1992), The relationship between investment in information technology and firm performance: A study of the valve manufacturing sector, Information Systems Research 3(4), pp. 307-333.
Youssef et al. (2003), An econometric estimation of ICT equipment, usage and depth of adoption in Catalan firms, ADIS University of Paris Sud, pp. 1- 26.